

## Weight Enforcement Scale Replacement

### Purpose and History

National weight standards apply to commercial vehicle operations on the U.S. Interstate Highway System. The System includes approximately 40,000 miles of limited access, divided highways that span the nation. States are allowed to set their own commercial vehicle weight standards for roads not included in the Interstate Highway System. The utilization of weight enforcement scales by the Iowa Department of Transportation (DOT) Motor Vehicle Enforcement (MVE) is a method to administrator vehicle size and weight laws in the State. The purpose of a commercial vehicle weighing program is to enforce legal load limits to prevent vehicles from damaging highways and bridges. The DOT weight enforcement program is balanced between the use of permanent weigh scale sites and portable weigh scales.

There are [12 scale locations in Iowa](#). As of July 2012, five scales have been identified by the DOT as currently in need of replacement due to age and condition. Typically, scales are 40-foot or 90-foot in length. The expected service life of a scale is 15 years. The current DOT practice is to replace scales that have aged beyond the expected service life or deteriorated beyond proper usage.

The five scales identified by the DOT as in critical need for replacement are all older than the life expectancy and experience heavy commercial vehicle utilization. These include:

- I-80 eastbound in Dallas County: The scale platform is dropping and the pit walls are cracking and shifting.
- I-380 northbound and southbound near Brandon: The scale pit walls for both sites are starting to fail and the scale platforms are cracking and shifting.
- I-80 westbound in Jasper County: The scale is over 20 years old.
- U.S. 71 near Early: The scale has aged beyond the expected service life.

In recent history, the last two scales replaced were the Avoca 90-foot scale in 2005 for \$286,000 and the Salix 40-foot scale in 2007 for \$168,000. Examples of repairs included replacements of deep pit truck scales, foundational construction, installation, calibration, five-year guarantee and service contracts, and construction for roadways.

### State Funding for Scale Replacement

All funding for scale replacement is appropriated from the Road Use Tax Fund (RUTF). In general, the DOT requests an average cost for scale replacement each year ranging from \$350,000 to \$550,000. Typically two scales are replaced per year and the amount requested by the DOT reflects the average cost for replacing one large 90-foot scale and one smaller 40-foot scale. An averaging method is used for determining the annual funding because each scale site is unique with specific issues that need to be considered when a scale is replaced. For example, there may be soil issues, shifting of concrete in the existing scale pit, or old cisterns and wells discovered under the pit site. These types of issues can result in cost variances. Additionally, the DOT has been exploring virtual scale technology improvements during replacements that involve the use of sensors and cameras on the scales and this is a contributor to cost.

The FY 2012 appropriation for scale replacements (\$550,000) was intended to allow the DOT to replace the Jasper County 90-foot scale and the southbound Brandon 40-foot scale. The FY 2013 appropriation was intended to replace the Dallas County 90-foot scale and the northbound Brandon 40-foot scale. However, the FY 2013 appropriation (\$350,000) was \$200,000 less the amount requested by the DOT. The DOT states that additional appropriations will be necessary to replace the northbound Brandon 40-foot scale and will delay replacement of the U.S. 71 scale near Early.

As of July 2012, three scale replacements contracts were signed after a competitive bidding process. These include: the Jasper County 90-foot scale for \$306,000 by Peterson Contractor Inc., the Brandon southbound 40-foot scale for \$253,000 by Taylor Contracting Company Inc., and the Dallas County 90-foot scale for \$306,000 by Peterson Contractor Inc. As of December 2012, the work on these three scales has been completed.

### More Information

Iowa DOT MVE Scale Locations: <http://www.iowadot.gov/mvd/omve/scales.htm>

U.S. Department of Transportation Truck Size and Weight: <http://ops.fhwa.dot.gov/freight/sw/index.htm>

Iowa General Assembly: <http://www.legis.iowa.gov/index.aspx>

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